

Table S1 The ICD-10 codes

Myocardial infarction: I21.x, I22.x, I25.2
Congestive heart failure: I09.9, I11.0, I13.0, I13.2, I25.5, I42.0, I42.5 - I42.9, I43.x, I50.x, P29.0
Peripheral vascular disease: I70.x, I71.x, I73.1, I73.8, I73.9, I77.1, I79.0, I79.2, K55.1, K55.8, K55.9, Z95.8, Z95.9
Cerebrovascular disease: G45.x, G46.x, H34.0, I60.x - I69.x
Dementia: F00.x - F03.x, F05.1, G30.x, G31.1
Chronic pulmonary disease: I27.8, I27.9, J40.x–J47.x, J60.x–J67.x, J68.4, J70.1, J70.3
Rheumatic disease: M05.x, M06.x, M31.5, M32.x–M34.x, M35.1, M35.3, M36.0
Peptic ulcer disease: K25.x - K28.x
Mild liver disease: B18.x, K70.0–K70.3, K70.9, K71.3–K71.5, K71.7, K73.x, K74.x, K76.0, K76.2–K76.4, K76.8, K76.9, Z94.4
Diabetes without chronic complication: E10.0, E10.1, E10.6, E10.8, E10.9, E11.0, E11.1, E11.6, E11.8, E11.9, E12.0, E12.1, E12.6, E12.8, E12.9, E13.0, E13.1, E13.6, E13.8, E13.9, E14.0, E14.1, E14.6, E14.8, E14.9
Diabetes with chronic complication: E10.2–E10.5, E10.7, E11.2–E11.5, E11.7, E12.2–E12.5, E12.7, E13.2–E13.5, E13.7, E14.2–E14.5, E14.7
Hemiplegia or paraplegia: G04.1, G11.4, G80.1, G80.2, G81.x, G82.x, G83.0 - G83.4, G83.9
Renal disease: I12.0, I13.1, N03.2–N03.7, N05.2–N05.7, N18.x, N19.x, N25.0, Z49.0–Z49.2, Z94.0, Z99.2
Any malignancy, including lymphoma and leukaemia, except malignant neoplasm of skin: C00.x–C26.x, C30.x–C34.x, C37.x–C41.x, C43.x, C45.x–C58.x, C60.x–C76.x, C81.x–C85.x, C88.x, C90.x–C97.x
Moderate or severe liver disease: I85.0, I85.9, I86.4, I98.2, K70.4, K71.1, K72.1, K72.9, K76.5, K76.6, K76.7
Metastatic solid tumour: C77.x–C80.x
AIDS/HIV: B20.x–B22.x, B24.x
Alcoholic liver disease: K70
Toxic liver disease: K71
Hepatic failure: K72
Chronic hepatitis: K73
Liver cirrhosis: K74
Other inflammatory liver diseases (K75)
Other liver diseases (K76)

ICD-10, International Statistical Classification of Diseases and Related Health Problems, 10th revision.

Table S2 Other covariates in model 1

Variables	OR (95% CI)	P value
Age, year	1.08 (1.07, 1.10)	<0.001
Sex, male (vs. female)	3.25 (2.30, 4.59)	<0.001
Household income level		
Q1 (lowest)	1.00	
Q2	0.93 (0.66, 1.31)	0.673
Q3	0.92 (0.68, 1.25)	0.592
Q4 (highest)	0.76 (0.57, 1.00)	0.053
Unknown	0.67 (0.29, 1.57)	0.357
Having a Job at surgery	1.02 (0.82, 1.27)	0.863
Residence at surgery		
Urban area	1.00	
Rural area	0.87 (0.70, 1.08)	0.212
Type of Surgery		
Wedge resection	1.00	
Segmentectomy	0.93 (0.54, 1.60)	0.789
Lobectomy	0.93 (0.69, 1.25)	0.627
Bilobectomy	2.46 (1.58, 3.84)	<0.001
Pneumonectomy	3.55 (2.35, 5.38)	<0.001
VATS (vs. open thoracotomy)	0.63 (0.50, 0.80)	<0.001
CCI at surgery, point	1.09 (1.06, 1.13)	<0.001
Preoperative chronic pulmonary disease	1.16 (0.82, 1.64)	0.393
Having a disability at surgery		
Mild to moderate (vs. no disability)	0.93 (0.68, 1.28)	0.662
Severe (vs. no disability)	1.04 (0.64, 1.687)	0.881
Redo case (vs. first case)	1.34 (0.82, 2.18)	0.247
Annual case volume of lung cancer surgery		
<621	1.00	
≥621	0.48 (0.35, 0.66)	<0.001
Type of hospital		
Tertiary general hospital	0.66 (0.52, 0.83)	<0.001
General hospital	1.00	
Year of surgery		
2011	1.00	
2012	0.64 (0.44, 0.95)	0.025
2013	0.61 (0.41, 0.91)	0.015
2014	0.37 (0.23, 0.57)	<0.001
2015	0.49 (0.33, 0.74)	0.001
2016	0.50 (0.34, 0.75)	0.001
2017	0.39 (0.26, 0.59)	<0.001
2018	0.31 (0.20, 0.48)	<0.001

Hosmer-Lemeshow test: Chi-square, 9.4, df=8, P=0.310. OR, odds ratio; CI, confidence interval; VATS, video-assisted thoracic surgery; CCI, Charlson comorbidity index.